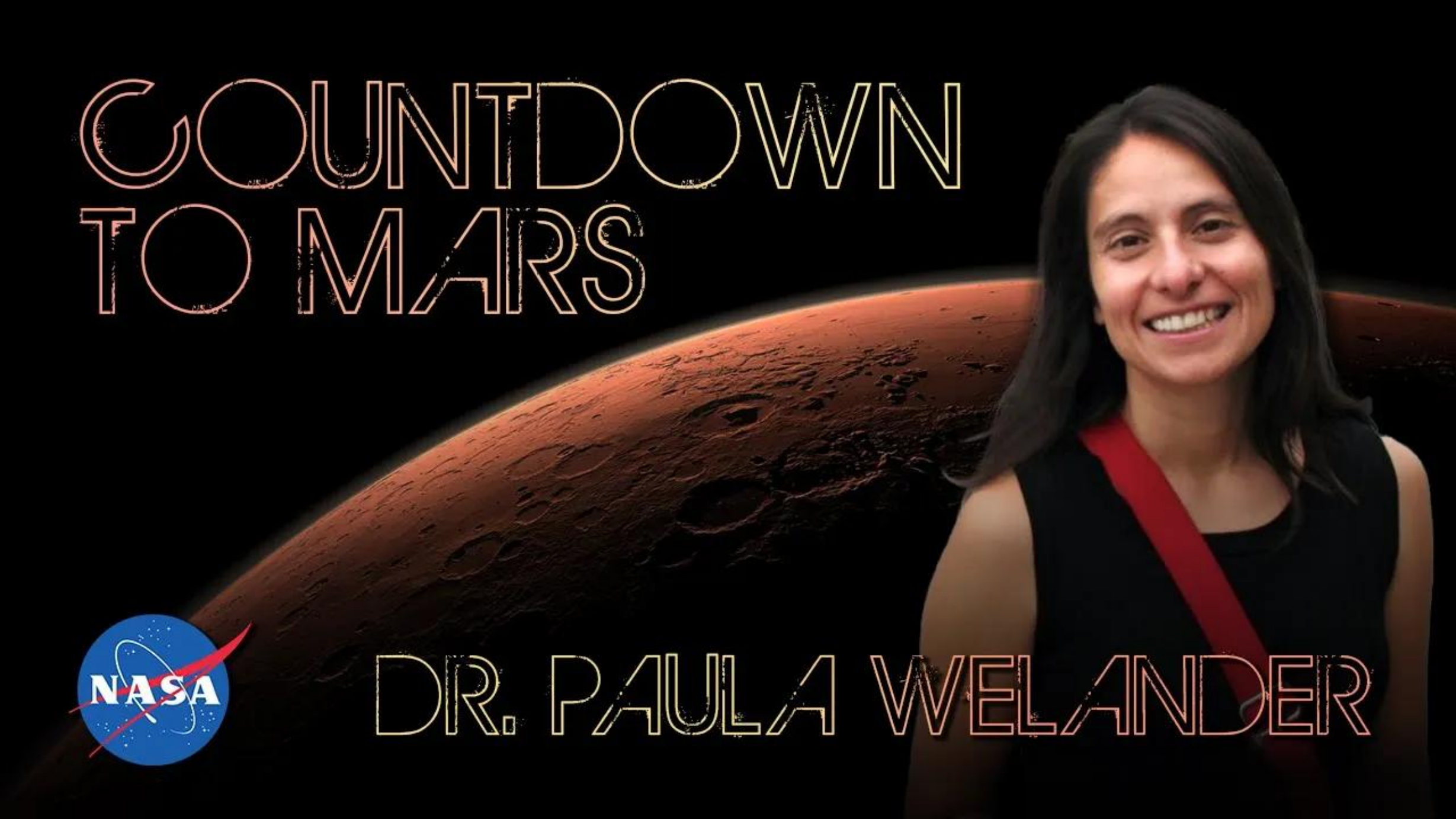
COUNTDOWN TO MARS



DR. PAULA WELANDER

1
00:00:13,200 --> 00:00:18,340
So, to me, it's exciting because it is a
mission that is centered around

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00:00:18,350 --> 00:00:22,410
astrobiology, and this idea that we're
trying to find signatures of life and as

3
00:00:22,410 --> 00:00:26,849
a microbiologist what is most exciting
is that you know when you go look for

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00:00:26,849 --> 00:00:30,689
life on Mars or any other planet you're
going to be looking for microbial life.

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00:00:30,689 --> 00:00:35,160
And so, it's so fascinating to me to
think that we might find signatures of

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00:00:35,160 --> 00:00:39,390
microbial life on Mars and if we do what
kind of life was it you know I'm

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00:00:39,390 --> 00:00:43,050
interested in proteins and molecular
machines within these organisms. How did

8
00:00:43,050 --> 00:00:47,309
these organisms, you know, make their
membranes; how did they, you know, what did

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00:00:47,309 --> 00:00:52,020
they eat to get energy for growth? And so,
it's just exciting to kind of expand

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00:00:52,020 --> 00:00:55,199
your mind that there might be other
forms of microbial life out there and

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00:00:55,199 --> 00:00:59,520
it's just, you know, as a microbiologist
thinking about microbes and how it's

12
00:00:59,520 --> 00:01:03,960
interrelated with this actual
mission is super exciting!

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00:01:07,220 --> 00:01:12,500
I think for me, it's the fact that it's
just, the return, the possibility of a

14
00:01:12,500 --> 00:01:18,620
return seems so ambitious to me, you know?
We work on, my group specifically,

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00:01:18,620 --> 00:01:23,090
works on biosignatures that are made by
modern microbes, and, to me, I was always

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00:01:23,090 --> 00:01:26,390
fascinated that geologists could find
these rocks that are like 2 billion

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00:01:26,390 --> 00:01:30,290
years old on earth, but here this mission
is still ambitious that they want to

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00:01:30,290 --> 00:01:34,280
look through these signatures on another
planet and that they could bring those

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00:01:34,280 --> 00:01:38,120
back so that we could analyze them! And I
think for me, from a broader context,

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00:01:38,120 --> 00:01:42,110
Perseverance just really shows how if
you get a diverse group of very creative

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00:01:42,110 --> 00:01:47,180
people together you can solve problems
that seem impossible, right? And in this

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00:01:47,180 --> 00:01:51,140
moment now the fact that we could, you
know, if you think about the pandemic and

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00:01:51,140 --> 00:01:55,580
think about how we can solve this
problem. If we can go to Mars and bring

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00:01:55,580 --> 00:01:59,540
back you know samples to look for
biosignatures of life then we can fix

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00:01:59,540 --> 00:02:02,990
problems like this pandemic, that we can
attack problems that seem insurmountable,

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00:02:02,990 --> 00:02:07,310
like the structural racism that's in our
systems. It seems like such an

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00:02:07,310 --> 00:02:11,690
insurmountable problem but I think we as
as human beings can solve these problems,

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00:02:11,690 --> 00:02:15,320
they're not too big. So, Perseverance,
more than anything, gives me hope that